

CHAPTER IV

RESULTS

The results of the data analysis are presented in this chapter. The chapter is divided into six sections. The first section displays the frequencies and percentages of the Demographic Characteristics of the respondents. The second section shows the Source of Information about Dengue Fever and the presence of Dengue cases among family/friends of the respondents. The third and fourth section presents the Knowledge and Attitude of respondents regarding Dengue Fever respectively. The fifth section indicates the Practices of respondents concerning Dengue Fever prevention. The sixth section displays the relationships between independent and dependent variables.

4.1 Demographic Characteristics of the Respondent

The Demographic Characteristics of the respondents are presented in Table 5. Out of the 307 respondents, the majorities were in the age group of 21 to 30 years (43.3%), followed in a descending order by ages between 31 to 40 years (24.8%), 41 to 50 years (16%), 15 to 20 years (10.7%), and 51 to 60 years (5.2%).

Nearly 80% of the respondents had received some formal education, with 45.6% having primary school education, 22.5% having attended middle school, 9.1% having attended high school, and 2% having college/university education. 72.6% of the respondents were house wives while the rest were working as street venders and workers. 84.7% of the respondents were married, 7.8% were single, and 7.5% were divorced or widow.

The majorities of the respondents (87.6%) were Myanmar. The other ethnic minorities were Karen (6.8%), Mon (4.9%), Paoah (0.3%), and Rakhine (0.3%).

Around 80% of the respondents had a monthly family income of less than 3,000 Baht while almost all of the remainders' monthly family income ranged from 3,000 to 5,000 Baht. About 70% of the respondents said that their duration of stay in Mae Sot was more than 3 years while the remainders had stayed there for less than three years.

Table 5: Demographic Characteristics of Migrant Women from Myanmar in Mae Sot Sub-District (n=307)

Characteristics	Number	Percentage
Age (years)		
15-20 years	33	10.7
21-30 years	133	43.3
31-40 years	76	24.8
41-50 years	49	16.0
51-60 years	16	5.2
Education		
Never attend school	64	20.8
Primary school	140	45.6
Middle school	69	22.5
High school	28	9.1
College/University	6	2.0
Race		
Myanmar	269	87.6
Karen	21	6.8
Mon	15	4.9
Paoah	1	0.3
Rakhine	1	0.3
Occupation		
House wife	223	72.6
Street vender	58	18.9
Factory worker	11	3.6
Non specific	10	3.3
Snack shop	3	1.0
Seamstress	1	0.3
Barber	1	0.3
Marital Status		
Single	24	7.8
Married	260	84.7
Divorced	14	4.6
Widow	9	2.9
Monthly Family Income		
<3000 Baht	243	79.2
3000-4000 Baht	50	16.3
4001-5000 Baht	11	3.6
>5000 Baht	3	1.0
Duration of Stay in Mae Sot		
<6 months	15	4.9
6 months-1 year	19	6.2
1 yr & 1 mth-2 yrs	30	9.8
2 yrs & 1 mth-3 yrs	27	8.8
>3 yrs	216	70.4

4.2 Sources of Information about Dengue Fever

Table 6 shows that almost 90% of the respondents had received some information regarding Dengue Fever. One third of the respondents (33.5%) received information from family/friends/neighbors. The remaining two thirds of the respondents received dengue information from television, pamphlet, hospital/clinic, newspaper, magazine, radio and school in a descending order of frequency.

Table 6: Frequency and percentage of Respondents classified according to Source of Information received about Dengue Fever

Items	Number	percentage
Respondents receiving Information about Dengue Fever		
Yes	272	88.6
No	35	11.4
Main source of Information about Dengue Fever		
Thai television	42	15.4
Myanmar television	42	15.4
Myanmar radio	7	2.6
Myanmar magazine	8	2.9
Myanmar newspaper	15	5.5
Pamphlet	36	13.2
Hospital/Clinic	27	9.9
Family/friends/neighbors	91	33.5
School	4	1.5

4.3 Knowledge on Dengue Fever

There were ten questions to test the basic knowledge of the respondents. The responses to these questions are presented in Table 7.

Nearly 75% of the respondents knew that the mosquito transmits Dengue Fever, is black with white spots on the body, while around 25% either did not know or gave a wrong answer. More than half (56.7%) of the respondents knew that the dengue transmitter mosquito bites during the day time, while the remainders either said it doesn't bite during day time or did not know when it bites. 70% of the respondents answered that without mosquitoes, Dengue Fever cannot spread directly from person to person, whereas 30% did not know or said that the disease can be spread directly from one person to another without mosquito bite.

Nearly 80% of the respondents said that the dengue transmitter mosquito lays its eggs in dirty sewage water, while around 20% did not know or said that it does not lay eggs in dirty sewage water. 71% of the respondents knew the symptoms of Dengue Fever, whereas 29% either could not identify the symptoms or did not know what the symptoms of Dengue Fever are. Regarding the treatment, only 40% claimed that there is no specific medication, while the remaining 60% either said there is specific medication or did not know whether there is any specific treatment for Dengue Fever.

Table 7: Frequency and percentage of Responses to Questions on Basic Knowledge regarding Dengue Fever (n=307)

Items (Total no. of items= 10)	Yes	No	Don't know
	n (%)	n (%)	n (%)
(1) Dengue Fever is transmitted by the mosquito which is black color with white spots on the body.	225 (73.3)	9 (2.9)	73 (23.8)
(2) Mosquitoes transmitting Dengue Fever, bite during the day time.	174 (56.7)	55 (17.9)	78 (25.4)
(3) Without mosquitoes, Dengue Fever cannot spread directly from person to person.	215 (70.0)	35 (11.4)	57 (18.6)
(4) The mosquito that transmits dengue lays its eggs in dirty sewage water.	244 (79.5)	32 (10.4)	31 (10.1)
(5) Symptoms of Dengue Fever include high fever, body aches and pain, and skin rashes.	218 (71.0)	13 (4.2)	76 (24.8)
(6) There is no specific medication for treatment of Dengue Fever.	123 (40.1)	88 (28.7)	96 (31.3)
(7) The mosquito that spreads dengue prefer living in the forest rather than living in and around human dwellings.	110 (35.8)	165 (53.8)	32 (10.4)
(8) The mosquito that transmits dengue usually lays its eggs in clean and clear water stored in water containers in the house.	186 (60.6)	80 (26.1)	41 (13.4)
(9) Discarded bottles, old tyres, and coconut shells outside the house can be breeding places for mosquitoes.	232 (75.6)	23 (7.5)	52 (16.9)
(10) The best preventive measure for residents living in areas infested with dengue transmitter mosquitoes is to eliminate the places where the mosquito lays her eggs.	255 (83.1)	20 (6.5)	32 (10.4)

Around one third (35.8%) of the respondents said that the dengue mosquito prefers living in forests, while more than half (53.8%) claimed that it prefers living in human dwellings, and the remaining 10 % did not know where the mosquito prefers to live. About 60 % of the respondents correctly answered that the mosquito lays its eggs in clean and clear water stored in water containers, whereas nearly 40% either did not know or denied that the mosquito does not lay its eggs in stored clean and clear water.

Around 75 % answered correctly that discarded bottles, old tires, and coconut shells outside the house can be breeding places for mosquitoes; 25 % of the respondents either said they did not know or answered incorrectly. Regarding preventive measures, 83 % said that elimination of the places where the mosquito lays her eggs, is the best preventive measure, while 17 % either did not know or answered incorrectly.

The respondents who could correctly answer 7 questions and above (70% and above) out of the ten questions were considered to have good knowledge, those who could give 4 to 6 correct answers (40-60%) were considered to have moderate knowledge, and those who could give 0 to 3 correct answers (<40%) were considered to have low knowledge. 44% of the respondents had high knowledge, 42% had moderate knowledge, and 4% had low knowledge (Table 8).

Table 8: Frequency and percentage of Respondents' Knowledge Level regarding Dengue Fever (n=307)

Knowledge Level	Number	percentage
High (70% and above)	135	44.0
Moderate (40-60%)	129	42.0
Low (<40%)	43	14.0
Minimum = 0, Maximum = 10, Mean = 5.94, SD = 2.24		

4.4 Attitude of Respondents towards Dengue Fever

There were 8 questions to assess the attitude of the respondents. The responses to the questions are presented in Table 9.

More than two thirds (71.7%) thought that anyone can get Dengue Fever, while the rest of the respondents did not think so. Around 80% of the respondents said that they were afraid of getting Dengue Fever if one of their family members had it, whereas the remainders said they were not afraid of getting it.

About 80% of the respondents thought that dengue infection can be fatal, whereas 18.6% did not think so. Nearly 85% of the respondents thought that a strong and healthy child is less likely to suffer from DHF than a weak and low immune child, while 15% did not think so. Two thirds (66.8%) of the respondents thought that Dengue

Fever can be spread from person to person like common cold spreads, whereas the remaining one third (32.6%) did not think so.

Table 9: Frequency and percentage of Responses to Questions on Attitude regarding Dengue Fever (n=307)

Items (Total no. of items=6)	Agree	Disagree	Missing Data
	n (%)	n (%)	n (%)
1. I think, anyone can get Dengue Fever.	220 (71.7)	87 (28.3)	0 (0)
2. If one of my family members has Dengue Fever, I am afraid of getting it too.	248 (80.8)	59 (19.2)	0 (0)
3. Dengue infection is dangerous because it can harm our lives.	248 (80.8)	57 (18.6)	2 (0.7)
*4. I think a strong and healthy child is less likely to be suffered from DHF than a weak and low immune child.	260 (84.7)	46 (15.0)	1 (0.3)
*5. In my opinion, Dengue Fever can be spread from person to person like common cold spread.	205 (66.8)	100 (32.5)	2 (0.7)
*6. I believe that after a dengue patient has recovered from his/her illness, he/she will not get Dengue Fever again.	132 (42.9)	173 (56.4)	2 (0.7)
*7. I think one can recover from DHF spontaneously without any treatment.	18 (5.9)	287 (93.5)	2 (0.7)
*8. Mosquitoes are always biting me but I never get Dengue Fever; therefore I believe that not all people getting mosquito bites are at risk of Dengue Fever.	159 (51.8)	146 (47.6)	2 (0.7)

* Refers to negative items

Nearly 43% of the respondents believed that after a dengue patient has recovered from his/her illness, he/she will not get Dengue Fever again, while 56% believed that a person can get Dengue Fever more than one time. Around 6% of the respondents thought that one can recover from DHF spontaneously without any treatment, whereas around 93.5% did not think so. About 52% of the respondents believed that not all people getting mosquito bites are at risk of Dengue Fever, while around 48% did not believe so.

The attitude level of respondents regarding Dengue Fever was classified as good, moderate, and poor as in Table 10. 30% had a good attitude, 53% had a moderate attitude, and about 17% had a poor attitude.

Table 10: Frequency and Percentage of Respondents Classified by Level of Attitudes concerning Dengue Fever (n=307)

Level of Attitudes	Number	percentage
Good (70% and above)	92	30.0
Moderate (40-60%)	163	53.1
Poor (<40%)	52	16.9

Minimum = 1, Maximum = 8, Mean = 4.77, SD = 1.31

4.5 Practices of Respondents regarding Dengue Fever Prevention

Out of 307 respondents, 20.2 % had wild grasses/bushes around their houses, of which only 16.1 % got rid of them at least once a week (Table 11).

Table 11: Frequency and percentage of Respondents who get rid of wild grasses and/or bushes around their houses

Items	Number	percentage
Respondents having wild grasses/bushes around their houses		
Yes	62	20.2
No	245	79.8
How often do they get rid of them?		
Once a week	10	16.1
Once every two weeks	4	6.5
Once every three weeks	6	9.7
Once a month	17	27.4
Once a year	1	1.6
Never	24	38.7
Total	62	100.0

Table 12 shows that about 41 % of the respondents protected themselves from mosquito bite during day time. The most popular preventive method was using mosquito coils (56.7%). 23 % of the households did not protect adults from mosquito bite; they protected only their children by using bed nets. 15 % of the respondents used mosquito coils for adults and bed nets for protection of children. Other methods that were rarely used included mosquito repellants (3.1%) and screening the house (2.4%).

Table 12: Frequency and Percentage of Respondents who Prevent Mosquito Bites during day time by using Different Methods

Items	Number	percentage
Respondents who protect themselves and their family from mosquito bite during day time		
Yes	127	41.4
No	180	58.6
Methods used		
Mosquito repellent	4	3.1
Mosquito coil	72	56.7
Screen the house	3	2.4
Bed net	29	22.8
Mosquito coil and bed net	19	15.0

Out of the 307 respondents, 60% covered water containers in their houses while the rest did not (Table 13).

Table 13: Frequency and Percentage of Respondents who Cover Water Containers in their houses

Items	Number	percentage
Respondents who cover water containers		
Yes	185	60.3
No	122	39.7
Total	307	100.0

According to Table 14, only 8.8 % of the 307 respondents put abate sand into water containers in their houses. Among those who put abate sand, around half (51.9%) put once every six weeks, nearly 30% put once every two months and 18.5% put once every three months.

Table 14: Frequency and Percentage of Respondents who put Abate Sand into Water Containers in their houses

Items	Number	percentage
Respondents who put abate sand into water containers		
Yes	27	8.8
No	280	91.2
How often do they put abate sand?		
Once every six weeks	14	51.9
Once every two months	8	29.6
Once every three months	5	18.5

Table 15 shows that almost all respondents (98.7%) cleaned and changed water containers in their houses. However, only 71 % of them did it at least once a week.

Table 15: Frequency and percentage of Respondents who clean and change water containers in their houses

Items	Number	percentage
Respondents who clean and change water containers in their houses		
Yes	303	98.7
No	4	1.3
How often?		
Once a week	216	71.3
Once every two weeks	51	16.8
Once every three weeks	9	3.0
Once a month	27	8.9

Table 16 shows that only 8.8% of the respondents had ant traps in their houses and 59% of those put nothing except water into the ant traps.

Table 16: Frequency and Percentage of Respondents who Prevent Mosquito Breeding in Ant Traps in their Houses

Methods	Number	percentage
Respondents who have ant traps in their houses		
Yes	27	8.8
No	280	91.2
Methods used to prevent mosquito breeding in ant traps		
Put oil	2	7.4
Put salt water	5	18.5
Put detergent	2	7.4
Put abate sand	2	7.4
Put nothing except water	16	59.3

Table 17 indicates that nearly one third (30.9%) of the respondents had flower vases in their houses and 100 % of them cleaned and changed water in flower vases at least once a week.

Table 17: Frequency and Percentage of Respondents who Clean and Change Water in Flower Vases in their Houses

Items	Number	percentage
Respondents who have flower vases in their houses		
Yes	95	30.9
No	212	69.1
How often do they clean and change water?		
At least once a week	95	100.0

Table 18 presents the frequency and percentage distribution of respondents' practices regarding prevention of Dengue Fever. 29% of them had good practices, nearly 48.5% had moderate practices, and 22% had poor practices.

Table 18: Frequency and percentage of Respondents classified by Level of Practices concerning Dengue Fever prevention (n=307)

Practice Level	Number	percentage
Good (70% and above)	90	29.3
Moderate (40-60%)	149	48.5
Poor (<40%)	68	22.1
Minimum = 2, Maximum = 8, Mean = 4.9, SD = 1.39		

4.6 Relationships between Independent and Dependent Variables

There was no significant association between demographic characteristics and attitude; and source of information and attitude. However, there was a highly significant association between knowledge and attitude ($p=0.002$) as presented in Table 19.

Table 19: Association between Knowledge and Attitude regarding Dengue Fever

Knowledge	Attitude n(%)			Total n (%)	Chi-Square	p Value
	Good	Moderate	Poor			
High	49 (36.3)	71 (52.6)	15 (11.1)	135 (100)	16.508	0.002
Moderate	37 (28.7)	70 (54.3)	22 (17.1)	129 (100)		
Low	6 (13.9)	22 (51.2)	15 (34.9)	43 (100)		

There was also a very highly significant association between attitude and practices ($P < 0.001$) (Table 20)

Table 20: Association between Attitude and Practices regarding Dengue Fever Prevention

Attitude	Practice n(%)			Total n (%)	Chi-Square	p Value
	Good	Moderate	Poor			
Good	39 (42.4)	46 (50.0)	7 (7.6)	92 (100)		
Moderate	46 (28.2)	84 (51.5)	33 (20.3)	163 (100)	46.836	0.000
Poor	5 (9.6)	19 (36.5)	28 (53.8)	52 (100)		

There was a significant association between duration of stay in Mae Sot and knowledge of respondents. Those who lived in Mae Sot for more than 3 years had better knowledge of Dengue Fever than those who lived there for less than 3 years (Table 21).

Table 21: Association between Duration of Stay in Mae Sot and Knowledge regarding Dengue Fever

Duration of Stay	Knowledge n(%)			Total n (%)	Chi-Square	p Value
	Good	Moderate	Poor			
3 years and below	30(32.9)	45(49.5)	16(17.6)	91(100)		
>3 years	105(48.6)	84(38.9)	27(12.5)	216(100)	6.444	0.04